

ABSTRACT OF THE DISCLOSURE

A nonvolatile memory transistor with multi values being capable of suppressing a short channel effect is provided. In an active region of a memory transistor, stripe-shaped impurity regions (pinning regions) are formed in a channel
5 length direction. The pinning regions suppress the spread of a depletion layer of a drain region, and a short channel effect caused by fine processing. Furthermore, in a memory transistor using pinning regions, by assigning one value or one bit of data to each channel forming region, the memory transistor is allowed to have multi values. More specifically, the present invention has a configuration in which a
10 floating gate electrode is provided on each of a plurality of channel forming regions via a first gate insulating film, and an electric potential can be applied independently to a plurality of pinning regions.